An overview of permanent layoffs

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C anadians are increasingly concerned about permanent layoffs. Many feel job instability and the possibility of job loss have increased in the 1990s. Governments, confronted with a large number of permanent layoffs each year, need to respond appropriately in order to improve labour adjustment so that displaced workers can quickly find a new job.

Permanent layoffs often lead to the use of Employment Insurance (EI) or even social assistance. These layoffs and the resulting worker displacements need to be better understood. No fewer than three dimensions are critical to the discussion: a) the cause of displacement – permanent layoffs are driven by numerous economic forces, on both the demand and supply side; b) the types of workers involved – some displaced workers have stable employment histories while others are repeatedly displaced; and c) the labour market outcomes – many displaced workers gain while others lose in the post-displacement process.

Using a new longitudinal data source on job separations, this article looks at the first of these issues, namely, the underlying causes of most permanent layoffs (see *Data sources*). It examines the role played by the business cycle, by changes in industrial demand – often associated with structural change – and by firm size. Other factors likely to play a role in layoffs are also considered. Finally, the study provides an overview of the

Data sources

This study is based on the Longitudinal Worker File (LWF) created by Statistics Canada. The LWF is a 10% random sample of all Canadian workers. It was constructed by integrating data from three sources: the Record of Employment (ROE) files of Human Resources Development Canada, the T4 files of Revenue Canada, and the Longitudinal Employment Analysis Program (LEAP) file of the Business and Labour Market Analysis Division (BLMA), Statistics Canada. The last one is an employer file.

Employers issue an ROE to every employee working in insurable employment who has had an interruption in earnings. These records indicate, among other things, the reason for the work interruption or separation. Because they provide information on all workers (covered by EI) with separations, they can be used to determine different types of job separations. In addition, employers issue each employee a T4 slip summarizing his or her annual earnings.

Thus, all workers at risk of job separations, as well as those who actually separate from their jobs, are known from these two data sources in each year. Statistics Canada combines these data sources with additional information from the LEAP file to create a longitudinal file of all Canadian workers: the LWF.

In the LWF, job separations are classified into three categories (quit, layoff and other) according to the reason for separation indicated in the ROE. A layoff is a separation due to shortage of work, and is considered temporary if the separated worker returns to the same employer in the same or following year; otherwise, it is permanent. If a worker is observed with a firm in one year but not in the previous one, this is considered a hire. This includes hiring to replace workers who have left, as well as expansion hiring.

Permanent separation rates (the quit rate, permanent layoff rate and the "other" permanent separation rate) are calculated as the number of permanent separations divided by the total number of persons employed at any time during the year (that is, the total number of person-jobs). The hiring rate is the number of hires divided by total employment in the year. On the other hand, the temporary separation rate is calculated by using the number of persons with at least one temporary separation, rather than the total number of temporary separations. The LWF, with its large sample size (1.8 million records in 1988), allows a detailed analysis of job separations by age group or industry.[1]

Comparisons with the Labour Market Activity Survey (LMAS) reveal that for the late 1980s the number of permanent separations and layoffs drawn from the survey was comparable to that in the LWF, in spite of the fact that one is drawn from a sample survey and the other is based on administrative data.

work displacement process in the Canadian economy.

Cyclical variation

Permanent layoffs have certain basic features. For example, their number remains high over all phases of a business cycle. It moved from 1.2 million in 1982, at the worst of the recession of the early 1980s, to 1.1 million in 1989, at the peak of the business cycle. By 1991, the middle of the last recession, it had reached 1.3 million (Table 1). The labour market is thus characterized by an ongoing and more or less stable number of layoffs, irrespective of expansions or recessions.

Table 1
Job separations and hirings

	Number of separations							
	Permanent				Temporary			
	Total	Layoffs	Quits	Other	Total	Layoffs	Other	Hirings
	'000							
1978	2,854.0	1,003.7	991.6	858.7	2,153.4	1,159.3	994.1	..
1979	3,038.2	902.7	1,183.5	952.0	2,174.8	1,139.2	1,035.6	3,293.7
1980	2,974.4	867.5	1,139.5	967.5	2,352.5	1,274.6	1,077.9	3,116.5
1981	3,476.4	1,042.9	1,361.4	1,072.2	2,659.8	1,518.7	1,141.1	4,192.1
1982	2,893.7	1,204.8	761.7	927.2	3,323.4	2,031.6	1,291.8	2,003.8
1983	2,640.2	1,098.7	696.8	844.7	2,598.8	1,600.5	998.3	2,992.9
1984	3,118.4	1,159.9	937.0	1,021.4	2,885.7	1,690.5	1,195.3	3,249.2
1985	3,395.5	1,152.8	1,145.4	1,097.3	2,862.8	1,626.6	1,236.2	3,966.0
1986	3,584.2	1,148.4	1,295.0	1,140.9	2,940.5	1,656.3	1,284.2	4,056.2
1987	3,893.6	1,149.4	1,539.6	1,204.5	2,860.6	1,569.6	1,291.0	4,466.5
1988	4,234.9	1,153.6	1,789.6	1,291.8	2,988.8	1,571.8	1,417.0	4,649.5
1989	4,252.6	1,137.4	1,813.0	1,302.2	3,073.5	1,624.0	1,449.4	4,761.4
1990	4,118.4	1,290.3	1,526.8	1,301.3	3,430.0	1,892.3	1,537.7	3,861.1
1991	3,537.2	1,283.8	1,070.5	1,182.9	3,479.1	2,006.3	1,472.8	3,078.6
1992	3,213.7	1,225.3	884.5	1,103.9	3,279.3	1,971.4	1,307.9	2,902.7
1993	3,074.0	1,165.2	837.3	1,071.5	3,085.5	1,840.6	1,245.0	2,952.0
1994	..	..	..	..	..	..	..	3,424.1

	Separation rates							
	Permanent				Temporary			
	Total	Layoffs	Quits	Other	Total	Layoffs	Other	Hiring rate
	%							
1978	20.9	7.4	7.3	6.3	12.9	7.0	6.5	..
1979	21.6	6.4	8.4	6.8	12.7	6.6	6.7	23.4
1980	21.0	6.1	8.0	6.8	13.2	7.0	6.8	22.0
1981	22.6	6.8	8.9	7.0	13.6	7.6	6.7	27.3
1982	20.8	8.7	5.5	6.7	17.8	10.8	8.1	14.4
1983	18.9	7.8	5.0	6.0	14.8	9.0	6.4	21.4
1984	21.3	7.9	6.4	7.0	15.8	9.1	7.3	22.2
1985	22.0	7.5	7.4	7.1	15.0	8.4	7.2	25.6
1986	22.2	7.1	8.0	7.1	14.7	8.1	7.2	25.2
1987	22.9	6.8	9.1	7.1	13.7	7.3	6.9	26.3
1988	23.8	6.5	10.1	7.3	13.8	7.0	7.3	26.2
1989	23.3	6.2	9.9	7.1	13.7	7.1	7.2	26.0
1990	23.0	7.2	8.5	7.3	15.3	8.3	7.7	21.6
1991	21.0	7.6	6.3	7.0	16.3	9.3	7.8	18.3
1992	19.8	7.5	5.4	6.8	16.0	9.4	7.2	17.9
1993	19.2	7.3	5.2	6.7	15.5	9.1	7.0	18.5
1994	..	..	..	..	..	..	..	21.0

Source: Longitudinal Worker File
Note: Permanent separation rates are calculated by dividing the number of permanent separations by the total number of employed persons at any time during the year. Temporary separation rates, on the other hand, are calculated with the number of persons who have had at least one temporary separation, rather than with the total number of temporary separations.

The permanent layoff rate does decline during expansions, but not dramatically. It moved from 8.7% in 1982 to 6.2% in 1989, and reached 7.6% in 1991 (Chart A). While temporary layoffs increased sharply and quits and hirings fell dramatically during recessions, permanent layoffs were not as cyclically sensitive. Thus, during the recession of the early 1980s, temporary layoffs rose by 78% (from 1.1 to 2.0 million), quits fell by 35% (from 1.2 to 0.8 million) and hirings by 39% (from 3.3 to 2.0 million), while permanent layoffs increased by under 34% (from 0.9 to 1.2 million). The most recent recession tells a similar story. From 1989 to 1991, temporary layoffs increased by 23% (from 1.6 to 2.0 million), quits declined by 40% (from 1.8 to 1.1 million), and hirings by 35% (from 4.8 to 3.1 million); on the other hand, permanent layoffs rose by only 13% (from 1.1 to 1.3 million).

Regression analysis was used to assess the cyclical sensitivity of these rates. This technique correlates the change in the four rates (for hirings, quits, temporary and permanent layoffs) with changes in the unemployment rate, a useful indicator of cyclical variation in the labour market from 1978 to 1992. The results confirmed those observed above. A one percentage-point increase in the 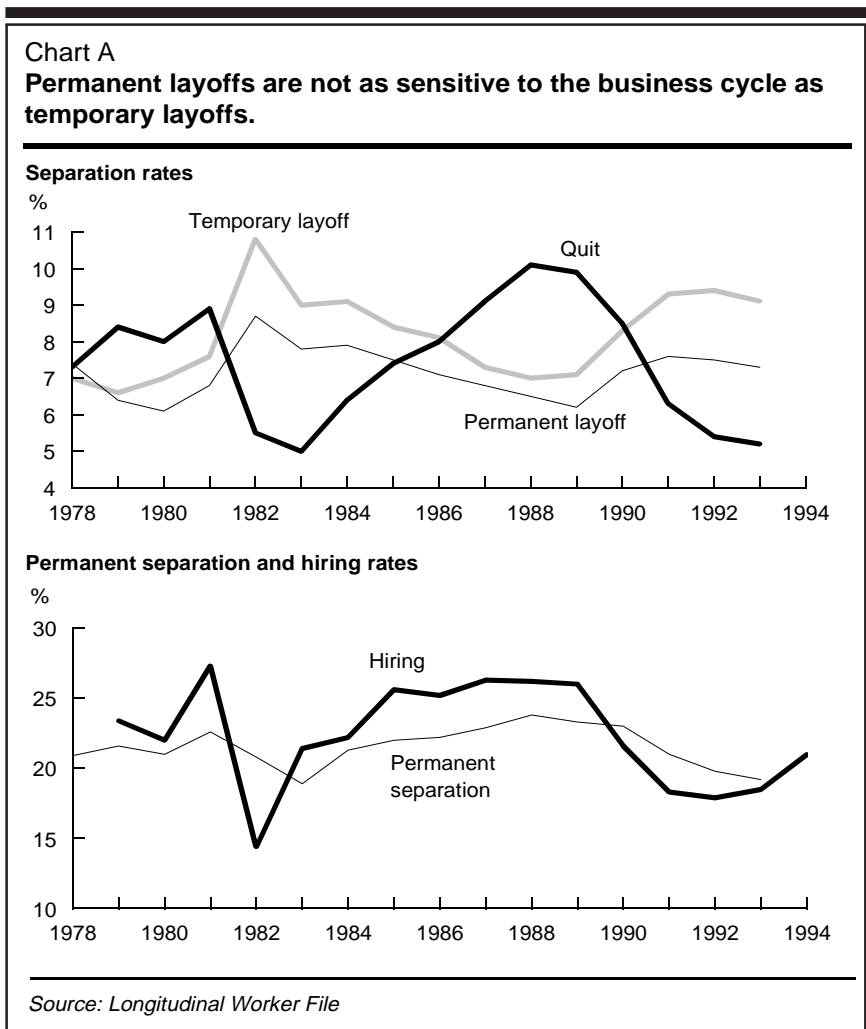unemployment rate was associated with a 0.9 percentage-point fall in the quit rate, a 1.4 point fall in the hiring rate, and a 0.6 point increase in the temporary layoff rate, but only a 0.3 point increase in the permanent layoff rate. The last rate is the least cyclically sensitive.

In spite of suggestions that a greater share of the 1990s job loss was permanent, because of cost cutting and increased structural change, the data reveal that both the 1980s and 1990s recessions were similar in this regard. While permanent layoffs did increase marginally as a share of all layoffs during the 1990-92 recession, the change was not significant (Picot, Lemaître and Kuhn, 1994). Nor did the change support the view that there had been a dramatic economy-wide shift toward more permanent job loss, often associated with restructuring. The pattern of worker displacement in the 1990s recession does not appear to have differed significantly from the 1981-82 experience.

Why do permanent layoffs remain high, even during recovery and expansion, and why are they not as cyclically sensitive as temporary layoffs, quits and hires? During economic downturns, quits decline sharply as workers are in less demand. Also, employers may reduce their workforce by means other than permanent layoffs. They may resort to temporary layoffs, separations, or cutbacks in hirings. During economic upswings, on the other hand, quits increase as workers find it easier to find new jobs, and employers expand their workforce by recalling workers temporarily laid off and by increasing hirings. These factors seem to explain, to a large extent, the ups and downs of temporary layoffs and quits during recessions and expansions.

Other processes

In addition to cyclical variation, other processes seem to influence the permanent layoff rate. These include the worker-employer job-matching process, the continual reallocation of market share and labour demand

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Chart A
Permanent layoffs are not as sensitive to the business cycle as temporary layoffs.

Separation rates

Permanent separation and hiring rates

Source: Longitudinal Worker File

among firms within industries, structural declines in some industries, and decreased labour demand during recessions.

First, individuals seeking jobs and employers seeking workers create matches that may or may not be in the best interest of both parties. As workers learn more about the employer, and vice versa, the match is either continued or terminated. The worker terminates the match by quitting; the employer may turn to permanent layoffs. Triggered by this job-match process, permanent layoffs occur on a continual basis, both in recessions and expansionary periods. They may be more common during expansions as hiring increases, and would tend to involve workers who have been with the employer for a relatively short period of time.

Second, within any market or industry at any given time, some firms will be more successful than others; they will increase their market share while others lose theirs. This reallocation of market share and labour demand will lead to job gains and hirings in some firms, but job loss and permanent layoffs in others. This process is also continual, and the resulting permanent layoffs will occur even if overall labour demand and total employment in a market or industry is increasing.

Third, the Canadian economy experienced a series of structural changes in the 1980s related to increasing globalization, changing composition of the labour force, and accelerating technological advances. Consequently, some industries and sectors have undergone a long-term decline in labour demand. Because these structural changes continue, job loss and permanent layoffs have persisted in some industries and sectors, even during recovery and expansions; this is certainly the case in the goods sector.

Fourth, permanent layoffs can also result from decreases in demand during recessions. These decreases tend to be economy-wide in scope and are virtually non-existent in expansions. As already noted, however, this is not the only or even primary cause of layoffs, since permanent layoffs remain high even during expansions.

To assess the significance of each process is beyond the scope of this study. The causes are numerous, however, and together they result in a large number of permanent layoffs on a continual basis. The following sections explore further some of these causes.

Industrial patterns in layoffs and job losses

Just as the permanent layoff rate is not highly correlated with changes in the business cycle, so is it only weakly associated with the aggregate economic performance of an industry. Industries with rapid employment growth do not necessarily have low layoff rates, and those with declining employment do not necessarily experience high rates. Put another way, permanent layoffs are not necessarily concentrated in industries that are in long-term structural decline as indicated by declining aggregate employment. The highest permanent layoff rate in 1988 (21.5%) was registered in construction – the industry with one of the highest rates of employment growth that year at 7.8% (Table 2). In neither 1983 nor 1988 (near the turning points of the business cycle) was the correlation between the permanent layoff rate and net employment growth statistically significant. This observation was tested at two levels of industrial aggregation (280 and 52 industries).

According to regression analysis, only for 1988 did a small, statistically significant correlation exist, and only when the process was tested at the 52-industry level. The faster growing industries tended to have marginally higher layoff rates. Overall, during any given year industry growth and the layoff rate were only slightly related.

Other characteristics of industries determine the permanent layoff rate, such as the level of the quit rate in the industry and the volatility of employment at the firm level within the industry. In industries with very high quit rates, job loss may be handled through ongoing attrition rather than permanent layoffs. The job loss in an industry is the sum of employment change across all firms in that industry that either disappeared or had declining employment between 1983 and 1988.[2]

Job losses and gains have been associated largely with specific changes in particular firms, rather than with economic conditions at the level of the industry (such as restructuring of employment) or the aggregate economy (the business cycle) (Baldwin and Gorecki, 1990; Davis and Haltiwanger, 1992). These firm-specific job losses and gains in turn play a major role in determining permanent layoff rates. An estimated 42% of all permanent worker reallocations in the United States (including quits, permanent layoffs and hires) are associated with job losses and gains in firms (Anderson and Meyer, 1994).

Changing economic conditions associated with industry (as measured by net change in employment) are thus not a good predictor of the permanent layoff rate. Events occurring in firms within these industries are likely more important. Some industries have highly volatile employment at the firm level, even during expansions, leading to higher job loss and hence potentially higher permanent layoff rates.

Firm size and permanent layoffs

Cyclical variation in aggregate demand is only weakly correlated with permanent layoffs. Furthermore, cross-sectional differences in employment change at the industry level do not explain differences in layoff rates. Differences by firm size,

Table 2
Job loss and permanent layoff rates by industry, 1988

| | Job loss * rate due to | | | Permanent layoffs | | | |
| | | | | | Distribution of | | |
	Total job loss	Disap- pearance of firms	Firms with declining employment	Permanent layoff rate	Permanent layoff rate	Total em- ployment	Net em- ployment change
				%			
Commercial sector	**11.0**	**2.9**	**8.1**	**7.9**	**84.7**	**74.7**	*3.5*
Forestry/mining	9.0	2.0	7.0	15.5	5.4	2.7	*3.8*
Manufacturing	8.6	1.8	6.8	6.0	15.1	21.2	*4.3*
Construction	17.5	4.1	13.2	21.5	18.2	5.4	*7.8*
Transportation	8.3	2.3	6.0	5.6	2.8	4.2	*-0.2*
Communication	1.3	0.7	0.6	2.2	0.7	2.8	*-1.3*
Utilities	1.6	0.6	1.0	1.4	0.2	1.5	*8.7*
Wholesale trade	10.9	2.3	8.6	5.9	3.7	4.9	*3.9*
Finance	6.7	1.7	5.0	1.4	0.5	3.2	*5.1*
Insurance	2.4	0.4	2.0	4.6	0.8	1.4	*2.5*
Real estate	15.3	3.3	12.0	3.8	0.8	1.6	*4.1*
Business management	12.8	3.3	9.5	6.2	4.3	4.7	*9.4*
Retail trade	9.6	2.9	6.7	7.4	14.6	11.6	*3.2*
Consumer services	15.6	4.7	10.9	8.9	17.4	9.4	*1.2*

Sources: Longitudinal Employment Analysis Program (job losses); Labour Market Activity Survey (permanent layoffs)
*   Job loss is simply the negative employment change in a firm between 1987 and 1988. A firm is a legal entity.

however, are significant. The media often present layoffs as massive cutbacks in large firms. These layoffs are often associated with major worker displacement (such as when a large manufacturer closes a number of plants). Reality, however, does not conform to this image.

Small- and medium-sized firms account for most permanent layoffs. In 1988, small firms (fewer than 20 employees) represented 20% of employment but 41% of permanent layoffs. Firms with 500 or more employees had 40% of employment, but only 17% of permanent layoffs. About one in 8 persons in small firms was laid off permanently in 1988, compared with only one in 29 in large firms (Table 3).

A number of explanations are possible. The first relates to the industrial distribution of large and small firms. If small firms were concentrated in industries with volatile employment due to rapidly shifting demand, then high layoffs would be observed in small firms. This would probably be a characteristic of the industry rather than

of firm size. But firm size differentials in layoff rates are observed in all major industries.

The second possible explanation involves differences in the characteristics of workers. Those in large firms have, on average, a higher level of education, are members of a union and are older and more experienced

than their counterparts in small firms. These characteristics are associated with lower permanent layoff rates and might explain the difference between small and large firms. However, the chance of being laid off from a small firm, even after controlling for worker characteristics, is roughly two-and-a-half times greater than that in large firms.

Table 3
Permanent layoffs by firm size, 1988

Number of employees	Permanent layoff rate	Distribution of permanent layoffs	Dist'n of total employment *
		%	
Total	**7.1**	**100.0**	**100.0**
1 to 19	12.0	41.4	19.9
20 to 99	7.6	17.0	15.6
100 to 499	5.7	9.7	13.0
500 and over	3.4	16.6	40.0
Size unknown	8.4	15.2	11.6

Source: Labour Market Activity Survey
*   This is the number of hours of employment observed in a particular group (for example, small firms) as a percentage of all hours of employment in the economy for 1988. A part-time job has a lower weight in this calculation than a full-time job.

Table 4
Rate of employment loss and gain by firm size, 1988

Number of employees	Rate of employment loss due to			Rate of employment gain due to		
	Total employment loss	Disappearance of firms	Firms with declining employment	Total employment gain	Appearance of firms	Firms with expanding employment
	%					
Commercial sector	**10.8**	**2.8**	**8.0**	**13.9**	**2.8**	**11.1**
1 to 19	16.9	5.3	11.6	26.5	6.5	20.0
20 to 99	12.5	3.0	9.5	16.6	3.6	13.1
100 to 499	11.8	3.1	8.8	12.6	2.3	10.3
500 and over	5.6	0.9	4.7	5.3	0.3	5.0

*Source: Longitudinal Employment Analysis Program*

The third possible explanation relates to the stability of small and large firms. The small firm sector is highly volatile: firms are much more likely to disappear and be replaced by others, obviously affecting layoffs. In 1988, employment among small firms fell 5% because some disappeared, and an additional 12% because declining (but continuing) firms downsized. Thus, 17% of total employment in small firms was lost in declining or disappearing firms (Table 4). Among large firms, only 6% of employment was lost (1% from disappearing firms and 5% from declining). With a rate of job loss three times higher than that of large firms, it is not surprising that small firms could have three to four times the permanent layoff rate. These observations are not unique to any particular year.

The difference between small and large firms' layoff rates persists over the course of the business cycle. During the 1980s and early 1990s, the likelihood of being displaced (permanently laid off) from a large firm, even during a severe recession like that of 1981 to 1982, does not approach that of being laid off from a small firm during the best of economic times (Chart B).

Of course, most hiring is concentrated in small firms as they expand or as new ones are created. For example, in 1993 the hiring rate (the number hired as a proportion of all employees in a firm) was around 25% for firms with fewer than 100 employees, and 9% among those with 500 and over. This means that very small firms (under 20 employees) accounted for 41% of all hiring, but only 29% of employment (person-jobs). Conversely, large firms (500 and over) registered only 15% of all hiring, but 31% of employment (person-jobs). Hiring is highly concentrated in small- and medium-sized firms, as are permanent layoffs.

Chart B
Small firms are much more likely to lay off employees.
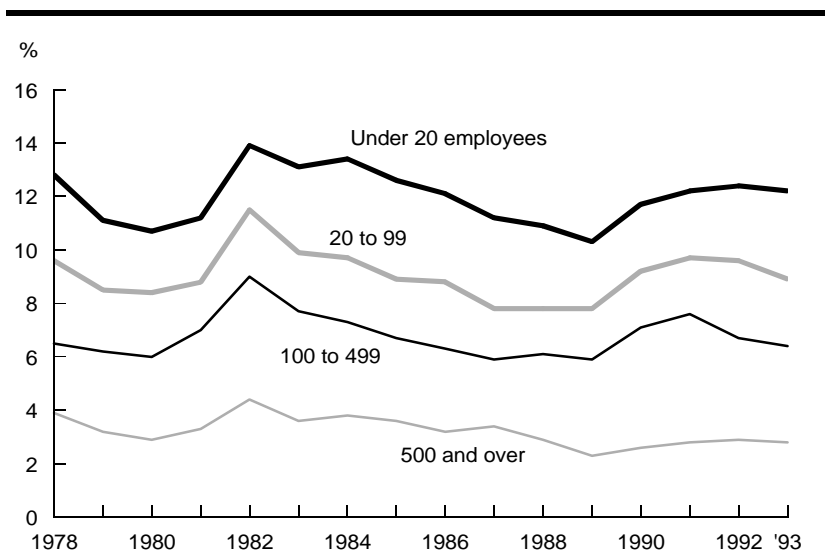
Source: Longitudinal Worker File

Conclusion

Permanent layoff rates are not determined primarily by cyclical fluctuations in aggregate demand or by factors affecting economic performance of industries. Rather, the process is more complex, relating to the employer-worker match process and, in particular, to the reallocation of market share and labour demand among firms within industries. This process is continual and ongoing, and results in the relative stability of permanent layoffs in the economy. This reallocation process is also more evident among small than large firms, resulting in a concentration of permanent layoffs in the small firm sector.

Permanent layoffs are an ongoing feature of a market economy in which there is "creative destruction." Workers are being laid off and hired in large numbers, more than a million per year. Increases in permanent layoffs do not define a recession the way a rise in temporary layoffs or a decline in hirings and quits might. Permanent layoffs are much less cyclically sensitive than the other methods firms use to adjust their workforce.

And there is no evidence that permanent layoffs played a larger role (relative to temporary layoffs) in firms' adjustments to changing demand in the 1990s recession than they did during the 1980s recession.

Thus, a decline in aggregate demand in recessions is not the principal cause of permanent layoffs, although it is obviously a contributing factor. Another possibility is decreasing employment in some industries, and increasing employment in others. Here again, however, little evidence supports the notion that the level of permanent layoffs is related to such changes in employment. Changes in net employment in an industry are not correlated with the layoff rate. Some declining industries have low layoff rates, while some expanding sectors have high rates. Certain other aspects within an industry determine the layoff rate. These are probably related to the level of gross job gain and loss at the firm level in an industry, independent of the changes in aggregate demand occurring in the industry. □

■ Notes

1   For more details on the LWF and definitions, see Heath et al. (1992).

2   The job loss rate is the number of job losses divided by total employment in the industry during the base year. Job loss refers to the loss of a job in a firm (that is, a decline in employment levels), not to the exit of a worker from a firm.

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